



Proudly built in the USA

Owner's Manual

TC- 140 *D-ICER*

PLUS FOR ONE-TONS



TruckCraft Corporation

Chambersburg, PA

1-800-755-3867

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"WHERE WORKMANSHIP IS EVERYTHING"

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Preface

Read this manual carefully and follow its recommendations.

This manual contains information for the installation, operation, and maintenance of the TruckCraft TC-140 D-ICER unit. Proper care and operation of the spreader will assure years of dependable service. Your local TruckCraft Dealer will instruct you in its general operation. Please have all operators carefully read this manual thoroughly before using equipment and keep it for reference. TruckCraft Corporation will be glad to answer any questions that may arise regarding the operation of your spreader.

Ordering Repair Parts:

When service is necessary, your local TruckCraft dealer can provide the assistance you need. If you cannot locate a dealer near you, contact TruckCraft Corporation. Always obtain original TruckCraft replacement parts from your dealer, substitute items could affect the performance and warranty of the unit.

When ordering parts for the **Model TC-140** have unit serial number, ECU serial number and description, or part number, of parts required. **The unit serial number is located on the bottom right side of the spreader. The ECU serial number is located on the back of the unit in the upper right hand corner-10 digit number.**

Unit Serial Number: _____

ECU Serial Number: _____

Date of Purchase: _____

Purchased From: _____

TruckCraft Telephone #800.375.3867 or 717.375.2900
 TruckCraft Fax #717.375.2975

Method of shipping parts to be specified such as customer pickup, UPS, Common Carrier, Parcel Post or Air Freight. All orders to be confirmed in writing, or faxed, to insure proper understanding of request.

Having preventative maintenance parts on hand could save you valuable time.

Improvements and Changes

Because TruckCraft strives to continually improve our products, we reserve the right to make changes and improvements wherever practical, without obligation to make those same changes or improvements to the equipment already sold. Photographs used in this manual may not be up-to-date with current design changes.

General Information

The TC-140 D-ICER *Plus* has been designed to be used as a tailgate replacement spreader on dump trucks up to 15,000 GVWR .

The TC-140 D-ICER *Plus* consists of four independent components:

- Tailgate replacement assembly
- Spinner assembly
- Mounting Bracket Kit
- Electrical control system

This unit is designed to handle all **free-flowing** ice control materials, including sand, salt, and abrasive up to $\frac{3}{4}$ " in diameter. It will not break up frozen lumps and cannot force material into the auger if the material is not free flowing. The maximum flow rate is 10,000 pounds per hour.

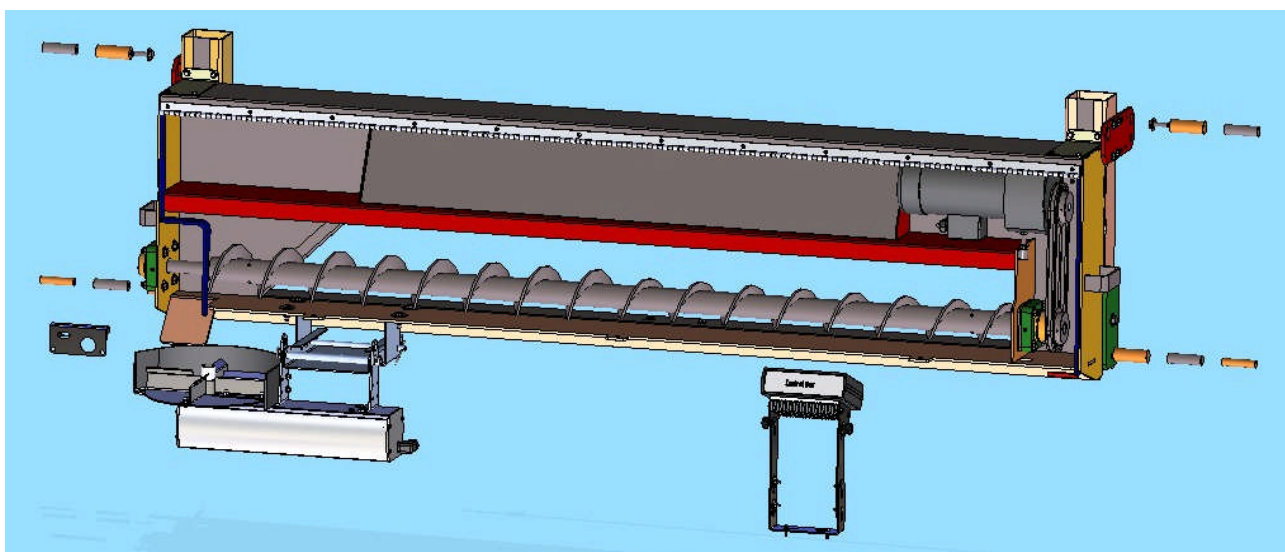


Figure 1 - TC-140 D-ICER with Access Cover Weldment removed

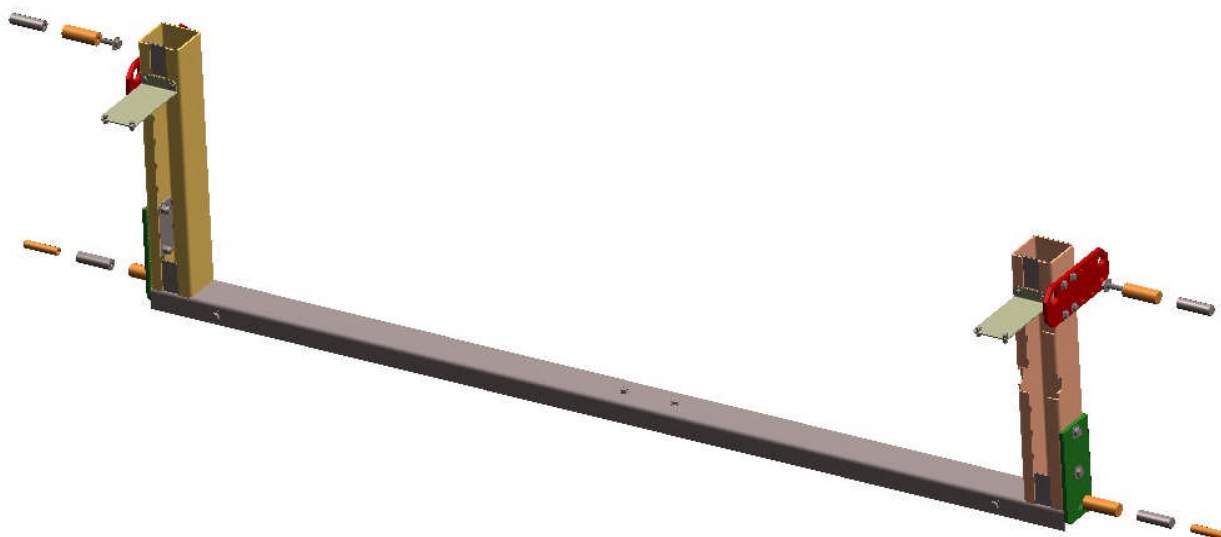


Figure 2 – Mounting Bracket Kit

Operating Instructions



THIS SYMBOL IS USED THOUGHOUT THIS BOOK WHENEVER PERSONAL SAFETY IS INVOLVED. TAKE TIME TO READ AND FOLLOW THE INSTRUCTIONS. BE CAREFUL!

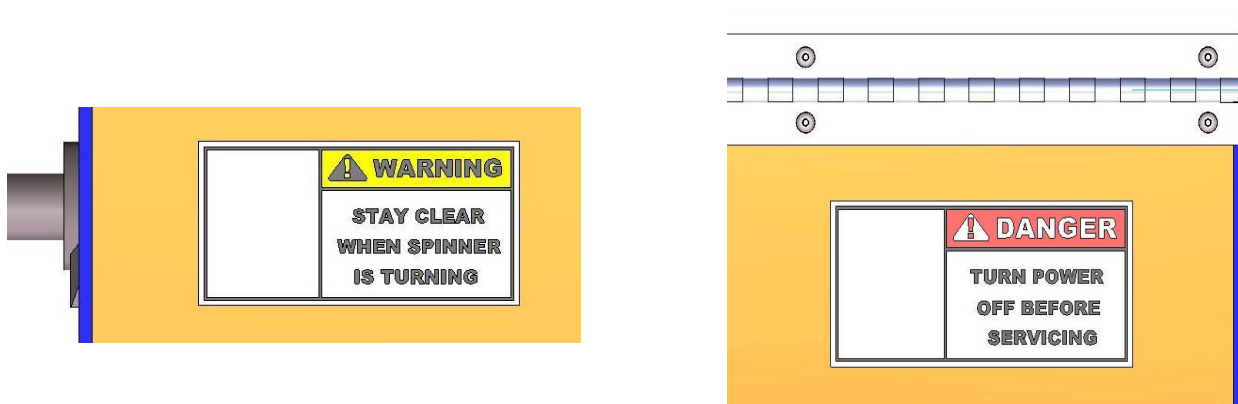


Figure 3



Observe the following safety procedures before and during use of spreader. Avoid possible injury and damage to equipment by following these rules and applying common sense.

Safety:

- **REVIEW** the operating instructions that were furnished with your dump body.
- **NEVER** exceed the rating of your truck, axles, or tires.
- **NEVER** exceed the manufacturers rating of the dump bed.
- **ALWAYS** watch for overhead wires and other height limitations when driving with bed lifted.
- **NEVER** drive with the dump bed raised any more than absolutely necessary.
- **NEVER** drive with the bed lifted when road surface is not level.
- **NEVER** allow frozen clumps to get into the auger.
- **NEVER** operate the auger with the cover open.

Operation:

Positioning the spinner

Raise the bed while observing the clearance between the spinner unit and the auger housing. With the spinner unit positioned approximately as shown on “**Illustration A**” **Fig.4**, load some deicing material in the bed for final adjustment of the spinner. Position the bed with the front bottom edge at eye level when sitting in the cab. This is the recommended operating position and the position to have the bed in when making final adjustments to the spinner location. With the bed raised to this elevation you can now run some material through the spinner and adjust the pattern to the position that you want it. Moving the spinner to the left moves the pattern clockwise and moving it to the right causes the pattern to move counterclockwise. The speed of the spinner changes the distance the material will be thrown and consequently the area to be covered.

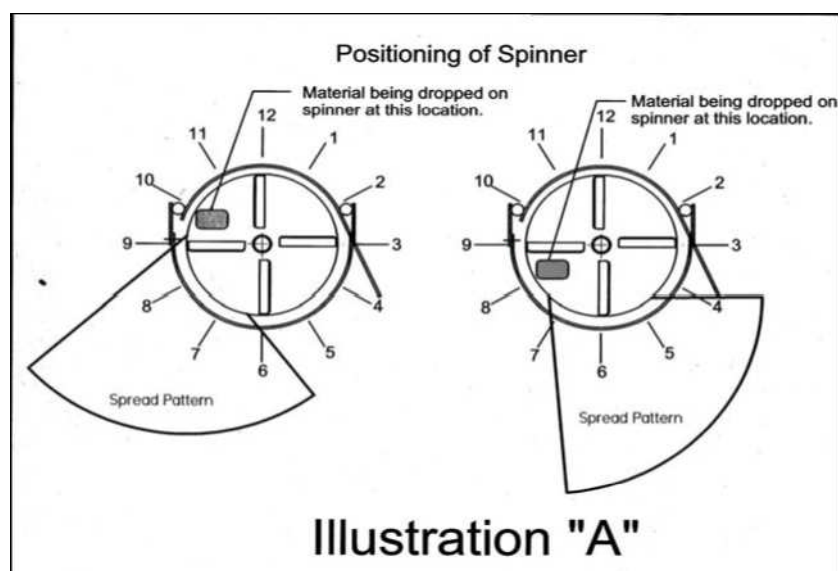


Figure 4

Spreading material

It is recommended that you not drive the truck with the bed raised any more than is necessary, and that you be constantly vigilant in watching for overhead obstructions and wires. When the auger empties the material that flows into it, stop and raise the bed to cause more material to flow into the auger. The speed of the auger controls the volume of material being spread while the speed of the spinner controls the area that is being covered.

Caution: Before starting auger and spinner make sure everyone is clear of the spreader area. Be sure power is turned off before working on or around the spreader equipment.

The Electronic Control Unit (ECU) provides all the controls for the D-ICER, see Fig. 5. When preparing to spread material, push the spreader “On/Off” power button. A “V 1.02XB” (Numbers may change on ECU updates) will appear in the Menu window indicating the unit is powered up. Push the motor “On/Off” power button. A “0” will appear in the spinner and auger windows. Select the up arrow until a “4” or “5” appears in both windows. Check at the rear of the truck to make sure the spinner is turning and spreading material. With the motor selector on, push the menu button and note the following sequence of displays as the button is pushed repeatedly:

- “12.0 BV” - Battery voltage-varies with vehicle and condition of electrical system. **Note:** a low battery warning will display in the menu window if voltage falls below 10 Volts.
- “12.0 SV” - Solenoid voltage-value should be close to BV.
- “100° F” - Electronic board temperature. **Note:** an over temperature warning will display in the menu window if temperature exceeds 180° F.
- “Running”
- “10 60 I” - Spinner amperage first; auger amperage second. **Note:** an over current warning will display in the menu window if auger current exceeds 70 A. or spinner current exceeds 35 A.

Routine stopping and starting of the spinner and auger should be performed by pushing the motor “On/Off” button. **Note:** Using this method, the speed settings are retained by the controller and when the button is pushed to restart, the motors are returned to their previous speeds.

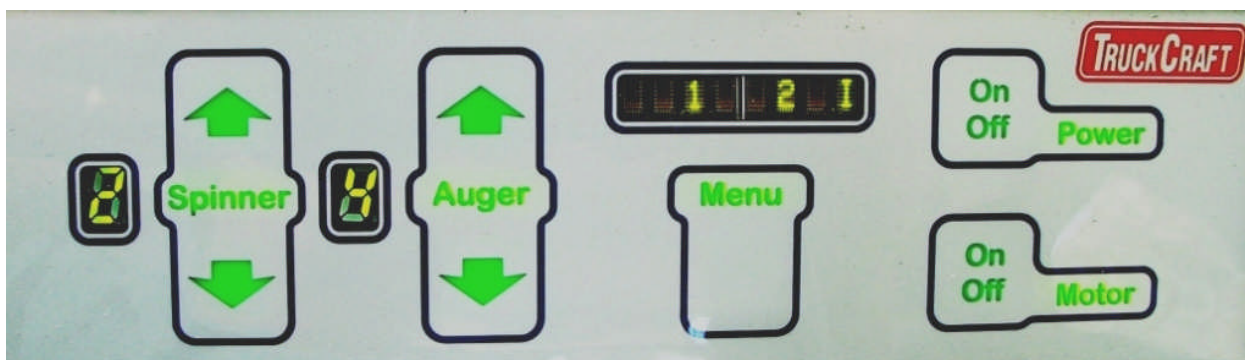


Figure 5 with spinner/auger amperage shown

Screened material should be used whenever possible to avoid clogging the auger. If a jam occurs the ECU motor speeds will flash and an auger over current warning will display in the menu area of the ECU. If this occurs, lower the dump body and push the motor “On/Off” button to shut the system down. Unplug the auger power cable from the motor harness. The plug is located at the rear of the truck on the driver’s side. **Warning: Always unplug the auger before attempting to clear a clog. Accidental starting of the auger could result in serious injury.**

Raise barrel bolt latches on access cover and raise cover for access to the jam. A pipe wrench can be used to turn the auger in the reverse direction to assist in cleaning the jam. Close the cover and latch prior to plugging the auger motor back into the harness.

Maintenance

Auger bearings

Once per season add a small amount of grease slowly to each bearing. Take care to not add the grease too fast or it will dislodge the end covers.

Roller Chain

Spray periodically with a high quality chain lubricant such as PJ1 Blue Label Chain Lube or equivalent.

Entire unit

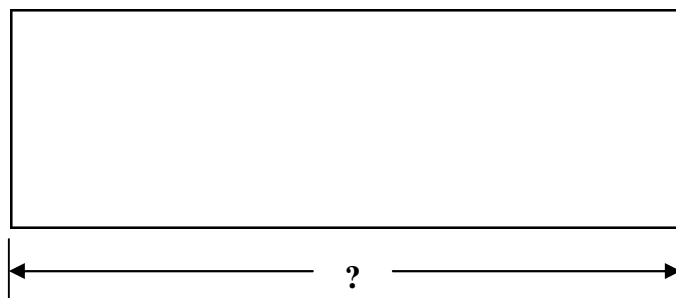
At the end of the season do a thorough wash down and cleaning prior to storing the unit for the summer.

Installation Instructions for TC-140 D-ICER:

Installing the Tailgate Replacement Unit

The TC-140 D-ICER *Plus* is designed for use on dump trucks up to 15,000 GVWR.
(See *Parts List, Figure 9 & 10, at end of manual for details*)

- Step #1.** Measure the overall width of the dump body tailgate at the bottom not including the latching pins.



Subtract this dimension from 90". The remainder represents the amount that must be cut off of the lower channel of item #78 (Bracket R.H.) in Figure 9. With this material removed, fit item #78 (Bracket R.H.) together with item #77 (Bracket L.H.) and measure the overall width. Be sure to measure to the outside of items #75 in order for the bracket assembly to fit properly.

- Step #2** Once the correct width of the bracket assembly is established, the R.H. and L.H. sides must be connected. This is accomplished by transferring the hole locations in the splice channel on item #77 (Bracket L.H.) to the underside of the lower channel on item #78 (Bracket R.H.). With these holes located, drill (2) 5/16" holes and bolt the brackets together using the fasteners provided.
- Step #3** Select (2) pins approximately the same diameter as the lower pins on the existing tailgate and install them to the pin bars (item #75) as shown in Figure 9. Do not fully tighten until the proper position is established in step #4.
- Step #4** With the dump body tailgate removed; position the bracket assembly against the back of the dump bed. Adjust the position of the pins so that the top of the horizontal channel is flush with the dump bed floor. Tighten the bolts.
- Step #5** While the bracket assembly is still in position on the back of the dump bed, determine whether mounting bars (item #74) or pins (items #71 or #72) are to be used at the top of the bracket assembly. After determining the proper parts to be used, holes will need to be drilled in the vertical columns of the brackets for installation of the mounting bars or pins. If the mounting bars (item #74) are used, it may be necessary to cut off any excess material protruding past the back of the bracket assembly. This can be determined in step #7 when it is fitted to the D-ICER housing. If the mounting bars hit the D-ICER housing the excess material will have to be sawed off.

Warning: In all cases where pins (items #70, 71, or 72) are being used, Locktite must be used on the threads of the bolts attaching these pins.

Connecting the Bracket Assembly to the D-ICER

- Step #6** Bolt the (2) bent plates (item #76) to the bracket assembly as shown on drawing
- Step #7** Remove the bracket assembly from the dump bed and lay it on a work surface with the bent plates pointing up. Lay the D-ICER on top of the bracket assembly. With the lid of the D-ICER open, position the D-ICER so that the floor surface (under the auger) is flush with the top of the horizontal channels on the bracket assembly. Center the D-ICER on the bracket assembly.
- Step #8** In the aluminum angle at the bottom of the D-ICER there are (2) 9/16" holes at each end. Mark the locations of these holes onto the horizontal channels of the bracket assembly and drill matching holes. Using the fasteners provided attach the D-ICER to the mounting frame.
- Step #9** On the top of the D-ICER where the bent plates (item #76) are located, drill (4) holes through the D-ICER housing using the holes in the plates as guides. Use the fasteners provided to attach.

Installing the Spinner Unit

(See Parts List, Figure 9 & 10, at end of manual for details)

Open the Auger Access cover and locate the four holes in the bottom plate. Align these holes with the mount holes in the spinner support bracket. Bolt the spinner in place. The spinner can be adjusted front to back by relocating the pin in the slide mount holes. Slotted holes in the support bracket provide side to side adjustment. Plug the spinner motor cord into the motors harness.

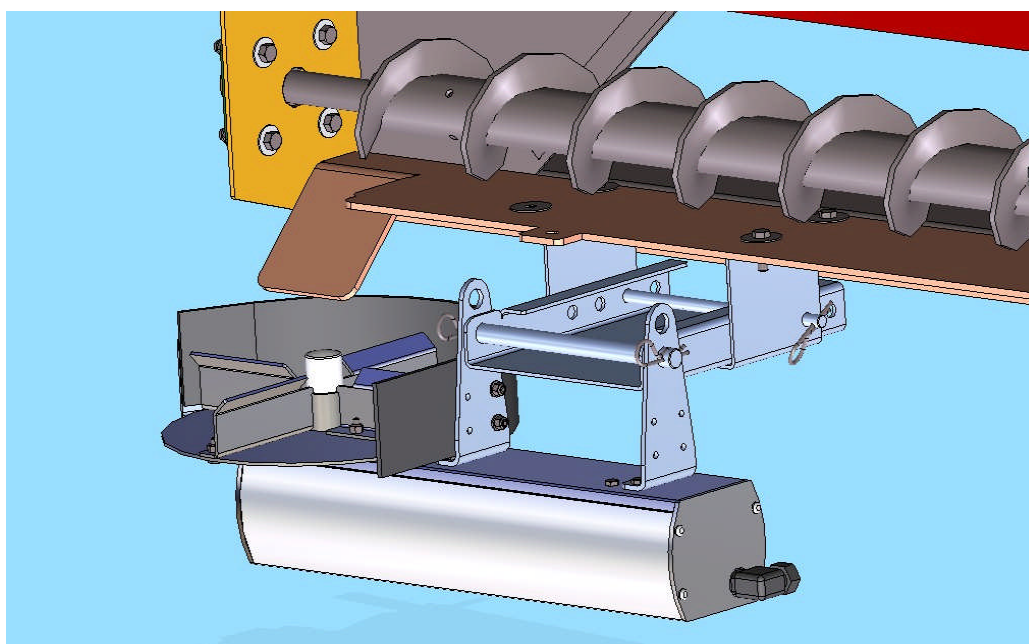


Figure 6

Installing Electronic Control and Wiring Harnesses

(See Figure 8, Drawing C2-04310)

- Step #1** Find a suitable location for the Electronic Control Unit Assembly (ECU Assembly) C2-04227, (ECU is C4-03879) in the cab. A good location is over the transmission with the bracket bolted to the floor or to the underside of the dash. **CAUTION:** Do not mount unit in the deployment path of the air bags.
- Step #2** Install the Power Harness B4-04221, Figure 10, Item 1 in the engine compartment. This harness includes a black box that contains a solenoid for turning the main ECU power on and off. The box also includes a 125 amp fuse for protection of the main power wiring. Install the harness with the black box located close to the battery. **Do not attach the four wire lugs to the battery until all other wiring is installed.** Attach the wiring harness to existing wiring, brackets, or other non-moving parts in the engine compartment. **Do not attach or get the wiring harness near heat generating components.** Find a location on the firewall to run the wiring through. An existing opening with a rubber grommet is preferred. Most truck manufacturers provide an opening for this purpose and locate it near the fuse box under the dash.
- Step #3** Install the Motors Wiring Harness B4-04222, Item 2. At the rear of the truck on the driver's side find a suitable location to mount the bracket, Item 97, to hold the plugs at that end of the wiring harness. This stainless steel bracket does not need to be painted. Use the holes in the bracket to locate (2) 3/16" diameter drilled holes to mount the bracket to the truck. Make sure the location is easily accessible and within reach of the power cords attached to the auger and spinner motors. Do not locate the plugs in an area where snow, mud and ice accumulate from tire spray. Run the harness along the truck frame beneath the deck and into the cab. Assure that the wiring harness does not contact any sharp objects and is not located too near any heat sources.
- Step #4** Plug the ends of both wiring harnesses into the back of the ECU unit in the cab as shown below.
- Step #5** Plug the auger and spinner power cords into the plugs on the Motors Harness. Connect the positive and negative wires to the battery in the engine compartment.
- Step #6** Make sure that no one is near the D-ICER prior to turning the power on. Check out the function of the unit per the "Operation" section of this manual.

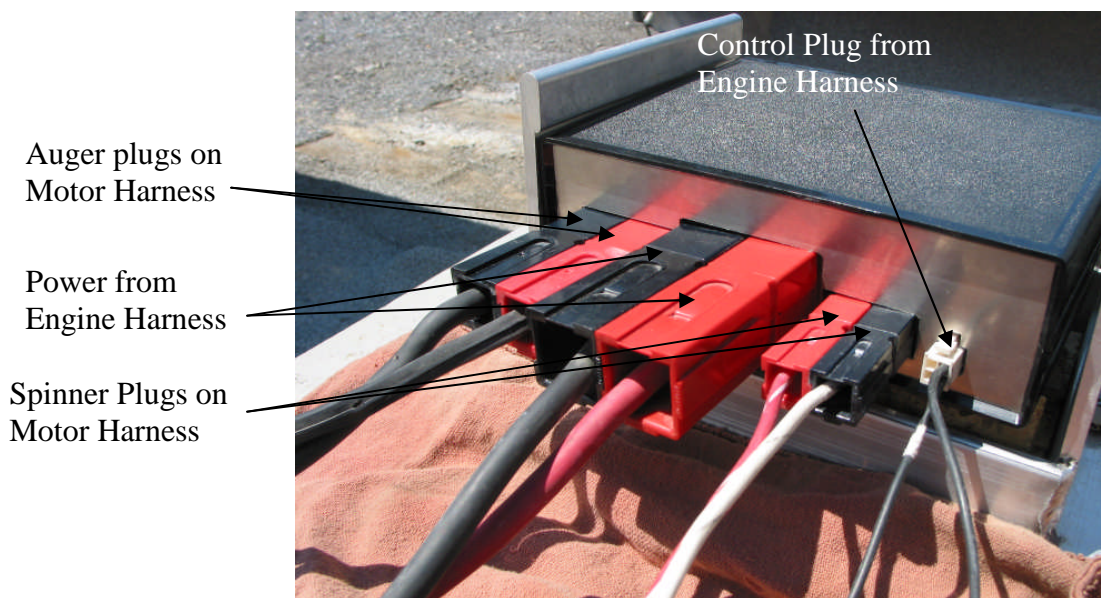
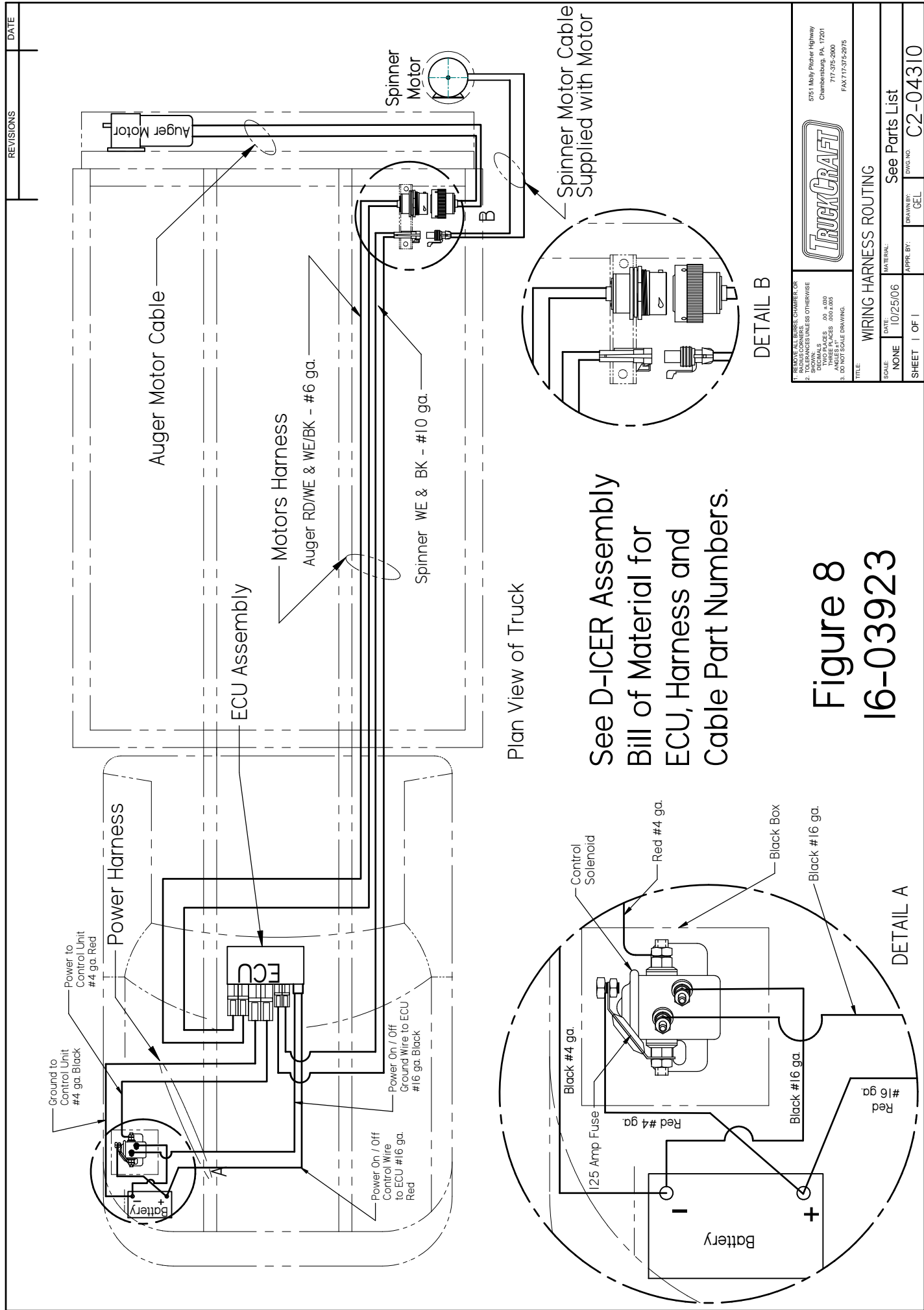


Figure 7



TC-140 D-ICER PARTS LIST

DI-0443I

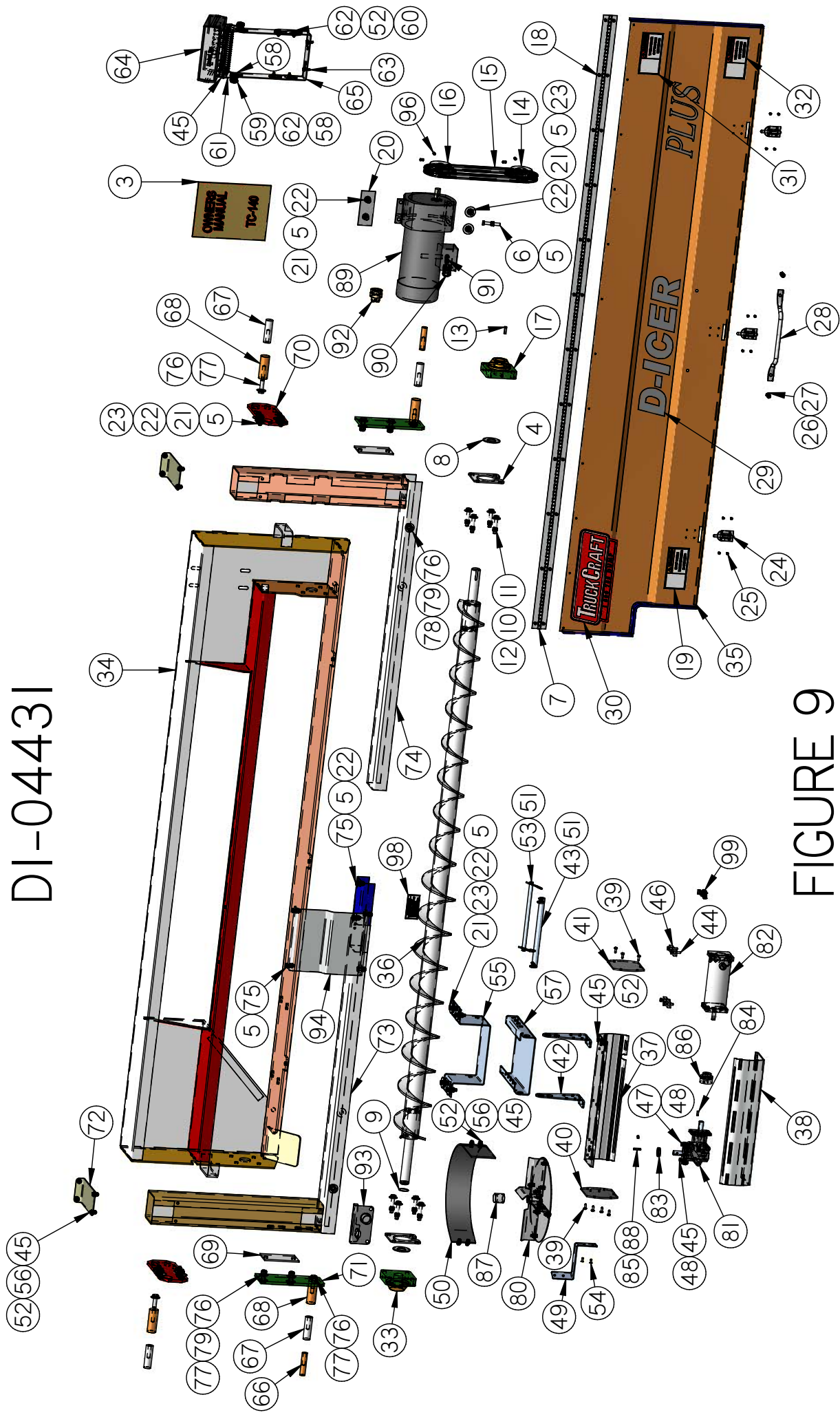


FIGURE 9

I6-03923

DI-0443I TC-I40 D-ICER PARTS LIST - FIGURE 10

Item	Part #	Qty	Name	Item	Part #	Qty	Name	Item	Part #	Qty	Name
1	B4-0422I	1	Power Harness / TC-160	39	P4-02787	7	Pan Hd Snt Metal Screw - #12 X .75 SS	77	P4-00687	8	Hex Hd Cap Screw - .50-13 X 1.50 SS
2	B4-04222	1	Motors Harness	40	B4-04174	1	End Plate / Spinner Housing / TC-160	78	P4-00689	2	Hex Hd Cap Screw - .50-13 X 1.25 SS
3	I6-03923	1	Installation Instructions	41	B4-04178	1	End Plate / Cord Grip End	79	P4-00836	6	Nyl. Insert Lock Nut - .50-13 SS
4	B4-00708	2	Seal Plate	42	D4-04155	2	Support Leg -Spinner Mt	80	B2-04176	1	Spinner Plate Assembly-for 1/6hp Motor
5	P4-00567	23	Nyl. Insert Lock Nut - .38-16 SS	43	B4-04252	1	Spinner Mtg Pin / .75 OD x 10.0"lg	81	B4-04258	1	Bevel Gear Reducer 1/2.1/ Zero Max
6	P4-00896	1	Hex Head Cap Screw	44	P4-00465	4	Hex Hd Cap Screw - .25-20 X 1.25 SS	82	P4-03974	1	Motor - 1/6HP - 12vdc
7	B4-01790	1	Hinge Detail	45	P4-00557	20	Hex Hd Cap Screw-.25-20 X75 SS	83	P4-02785	1	Felt Washer 1/4"thk x 3/4"IDx 1 1/4"OD
8	A4-00720	2	Slinger	46	B4-04270	2	Spacer-Spinner Motor / Housing	84	A4-04319	1	KEY .19 x .19 x .625" lg SS
9	P4-0082I	1	Spiral Retaining Ring / External	47	P4-0431I	2	Hex Hd Cap Screw - .25-20 X .625 SS	85	P4-00883	2	Cup Point Set Screw .25-20 x .38 SS
10	P4-00832	8	Hex Hd Cap Screw - .44-14 X 2.25 SS	48	P4-03919	4	Hex Serrated-Flange Nut .25-20	86	P5-0574I	1	Coupling, Single Disc
11	P4-00833	8	Nyl. Insert Lock Nut - .44-14 SS	49	C4-0427I	1	Brace- Spinner Shield Support	87	A4-01494	1	Cap - 3/4"
12	P4-00834	8	Flat Washer - .44 SS	50	B4-04305	1	Deflector	88	A4-01493	1	KEY - .19 SQ x 1.00 SS
13	A4-00825	1	Key - .25 SQ X 1.25 SS	51	A4-01440	4	Hairpin	89	A4-02659	1	Gearmotor
14	A4-00823	1	Sprocket / Auger / 1.25" Shaft Dia.	52	P4-00566	18	Nyl. Insert Lock Nut - .25-20 SS	90	A4-04302	1	Cord Grip Ftg/Stgt
15	A4-00824	1	Roller Chain	53	B4-04267	1	Pin- Spinner Brkt Mtg / .50 OD x 10.0"lg	91	P4-03567	1	Grommet, Bick Rbr .44 ID
16	A4-00822	1	Sprocket/Gearmotor/75" Shaft Dia.	54	P4-03546	2	Magna-Lok S/S (Long) - .19 SS RIVET	92	B4-04315	1	Cable-Auger Motor, 12ft
17	A4-00794	1	Bearing 1.25 w/ Open Cap/4 Bolt	55	C4-04419	1	Spinner Support Bracket, TC-140	93	C4-04225	1	Bracket / Deutsch-Delphi Plugs
18	P4-03547	24	Rivet, .19 SS/Magna-Lok (Short)	56	P4-00569	20	Flat Washer - .25 SS	94	D4-04533	1	Brace
19	A4-00838	1	Decal / Warning / Spinner	57	D4-04154	1	Slide Mount -Spinner	95	A4-0240I	1	Decal / PLUS
20	B4-00816	1	Gearmotor Mounting Bar	58	A4-03274	2	Bar	96	P5-05742	4	Cup Point Set Screw .31-18 x .50 SS
21	P4-00615	16	Hex Head Cap Screw	59	A4-04303	2	Knob / ECU	97	P4-04542	1	Cap, Vinyl
22	P4-00570	28	Flat Washer - .38 SS	60	P4-02406	6	Flat Washer - .25 Zinc Pl.	98	A4-04572	1	Decal / Box Not Watertight
23	P4-00879	14	Flat Washer	61	B4-04250	2	Side Brace / ECU Mtg	99	A2-02416	1	Spinner Plug Assembly
24	A4-03248	3	Barrel Bolt	62	P4-03792	6	Carriage Bolt - .25-20 x .75" SS				
25	P4-01907	12	Pop Rivet	63	P4-02376	2	Hex Wshr Hd Thd Frmg Scr-.25-14 x .75				
26	P4-00885	2	Nyl. Insert Lock Nut - .31-18 SS	64	C4-03879	1	Electronic Controller/D-icer				
27	P4-00884	2	Hex Head Cap Screw	65	C4-04226	1	Bottom - Bracket				
28	A4-0326I	1	Grab Handle / Aluminum	66	A4-02316	2	Pin .75"Ø				
29	A4-00837	1	Decal / D-ICER	67	A4-02317	4	Pin 1.00"Ø				
30	B4-04184	1	Large LOGO Decal - 3D Effects	68	A4-02318	4	Pin 1.25"Ø				
31	A4-00839	1	Decal / Danger / Sprockets	69	A4-02340	2	Plate / Fastener				
32	A4-00840	1	Decal / Danger / Auger	70	B4-02314	2	Mounting Bar				
33	A4-00793	1	Bearing 1.25 w/Closed End/4 Bolt	71	B4-02315	2	Pin Bar				
34	C3-04422	1	Housing Weldment	72	B4-02337	2	Bent Plate				
35	C3-04428	1	Access Cover Weldment	73	C3-02320	1	Bracket LH				
36	C3-01785	1	Auger Weldment	74	C3-02335	1	Bracket RH				
37	C4-04172	1	Spinner Hsg.-Top	75	P4-00562	6	Hex Hd Cap Screw - .38-16 X1.0 SS				
38	C4-04173	1	Spinner Hsg.-Bottom	76	P4-00620	16	Flat Washer - .50 SS				

Warranty

TruckCraft Corporation warrants each **D-ICER** to be free from defects in material and workmanship for a period of **Two Years** from the date of sale to the original retail purchaser and agrees only to repair or replace at its own expense, any part or parts of the product found to be defective in material or workmanship, provided TruckCraft is notified of such defect or defects within the **Two Year** warranty period and given reasonable time to correct the defect.

Installation and operation of the product must be in accordance with TruckCraft's instructions. Repairs required following improper use or application of any products shall not be considered defects within the scope of the foregoing warranty. Warranty will not be considered on any altered, modified, or misused part and failures due to lack of maintenance or accidents. TruckCraft does not warrant against corrosion. Warranty claims by the user must be made to the dealer from which the product was purchased, unless otherwise authorized by TruckCraft. This warranty does not cover the shipping costs of defective parts to or from the dealer. No claims for labor shall be considered unless preauthorized by TruckCraft. No dealer has authority to make any representation or promise on behalf of TruckCraft, or to alter or modify the terms or limitations of this warranty.

TruckCraft Corporation

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